(6 pages)

Reg. No. : ....

Code No. : 20319 E   Sub. Code : AMCS 51

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

Fifth Semester

Computer Science — Core

RELATIONAL DATABASE MANAGEMENT SYSTEM

(For those who joined in July 2020 onwards)

Time : Three hours   Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The output of the DDL is placed in the data dictionary, which contains ————

   (a) Query   (b) Transaction

   (c) Metadata   (d) Log

2. User which interact with the system using database query language is called as

   (a) Sophisticated User

   (b) Naive User

   (c) Database Administrator

   (d) Application Programmer

3. Database ———— which is the logical design of the database, and the database ———— which is a snapshot of the data in the database at a given instant in time

   (a) Instance, Schema

   (b) Schema, Instance

   (c) Relation, Schema

   (d) Relation, Domain

4. A ———— is a set of one or more attributes that, taken collectively, allow us to identify uniquely a tuple in the relation.

   (a) Super Key   (b) Primary Key

   (c) Foreign Key   (d) Candidate Key

5. The ———— clause is a list of the relations to be accessed in the evaluation of the query.

   (a) Select   (b) Where

   (c) From   (d) Order by

6. Which of the following is not a built in aggregate function in SQL?

   (a) avg   (b) max

   (c) count   (d) total

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7. Which of the following gives a logical structure of the database graphically?

   (a) Entity-relationship diagram

   (b) Entity diagram

   (c) Database diagram

   (d) Architectural representation

8. Tables in second normal form (2NF):

   (a) Eliminate all hidden dependencies

   (b) Eliminate the possibility of a insertion anomalies

   (c) Have all non-key

   (d) Have a composite key fields depend on the whole primary key

9. How can you change "Thomas" into "Michel" in the "LastName" column in the Users table?

   (a) UPDATE User SET LastName = 'Thomas' INTO LastName = 'Michel'

   (b) MODIFY Users SET LastName = 'Michel' WHERE LastName = 'Thomas'

   (c) MODIFY Users SET LastName = 'Thomas' INTO LastName = 'Michel'

   (d) UPDATE Users SET LastName = 'Michel' WHERE LastName = 'Thomas'

10. ———— is a program that performs some common action on database data and also stored in the database.

    (a) Stored Procedure   (b) Trigger

    (c) Stored Function   (d) None of the above

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Narrate the various applications of DBMS.

    Or

    (b) State and explain database languages and their purpose in DBMS.

12. (a) Identity various Keys used in DBMS.

    Or

    (b) Discuss natural join with suitable examples.

13. (a) Explain in detail aggregate functions in SQL with example.

    Or

    (b) Describe the different data types in SQL. Explain them with example.

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14. (a) Elaborate mapping cardinalities in E-R schema.

Or

(b) Compare and Contrast between specialization and generalization in extended ER features.

15. (a) Create Student Table using oracle with the following fields Roll number, Student name, Date of Birth Department name, Percentage obtained.

   (i) Create the mentioned table (Define Roll number as primary key)

   (ii) Insert 3 records

   (iii) Update the Student percentage as 80 whose id roll number is 103.

Or

(b) Discuss about creating views in oracle.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Discuss the database system architecture with neat diagram.

Or

(b) Classify the different types of data models.

17. (a) Enumerate the operations performed in Relational Algebra. Give each an example.

Or

(b) Describe the basic structure of SQL Queries with suitable example.

18. (a) Recall various string operations in SQL with an example.

Or

(b) Briefly explain about nested subqueries in SQL.

19. (a) Outline the different types of attributes in E-R Diagram.

Or

(b) Explain Boyce Codd Normal Form and lossless decomposition.

20. (a) Briefly explain the concept of creating sequences using oracle.

Or

(b) Elaborate the concept of procedure with program.

———————